

New Synonyms in Central and South Asian Sphecidae (Hymenoptera)

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Abstract.—A study of type material at the Natural History Museum, London, England, revealed 9 new synonyms for species described from Central Asia and former British India. These names are: *Ammophila bolanica* Nurse, 1903 = *Podalonia hirsuta mervensis* (Radoszkowski, 1887); *Cerceris nursei* Turner, 1912 = *Cerceris antennata* F. Morawitz, 1890; *Cerceris supposita* Kohl, 1916 = *Cerceris rothueyi* Cameron, 1890; *Cerceris compta* Turner, 1912 = *Cerceris turkestanica* Radoszkowski, 1893 (= *Cerceris rufonodis* Radoszkowski, 1877); *Cerceris barrei* Radoszkowski, 1893 = *Cerceris tetradonta* Cameron, 1890; *Cerceris rhynchophora* Turner, 1912 = *Cerceris unidentata* F. Morawitz, 1890; *Laphyragogus turanicus* Gussakovskij, 1952 = *Laphyragogus kohlii* (Bingham, 1896) (described in *Lianthrena*); *Palarus nursei* Turner, 1911 = *Palarus funerarius* F. Morawitz, 1890; and *Philanthus marikovskii* Kazenas, 1977 = *Philanthus elegantissimus* Dalla Torre, 1897 (= *Philanthus elegans* F. Smith, 1873). Lectotypes are designated for *Ammophila bolanica*, *Cerceris compta*, *Cerceris nursei*, *Cerceris rhynchophora*, *Laphyragogus kohlii*, *Laphyragogus turanicus*, and *Palarus nursei*.

One major problem facing students of Central Asian insects is their relation to the biotas of Pakistan and northwestern India. For a variety of reasons, Russian authors who studied the sphecid fauna of Central Asia over the last 140 years (Eversmann, Radoszkowski, F. Morawitz, Shestakov, Gussakovskij, Marshakov, myself and others) have not considered the species described from former British India (now India and Pakistan) by Cameron, Bingham, Nurse, F. Smith, and Turner. These latter authors, conversely, showed little interest in the work of Russian authors. The two areas, however, are not only adjacent geographically, but they closely resemble each other in their habitat types and ecological conditions (ranging from lowland hot deserts to high mountains with glaciers). With hundreds of species described on each side, it is inevitable that the ratio of synonyms may be high. A number of synonyms in Sphecidae were established by Pulawski (1975, 1979, 1995),

Marshakov (1977), Budrys (unpublished), and Antropov (unpublished).

For more than 25 years I have been studying sphecid wasps of Kazakhstan and adjacent republics of Central Asia. I previously studied almost all the types of the species described by earlier Russian authors during my many visits to the Zoological Institute of Russian Academy of Sciences in St. Petersburg, and to the Zoological Museum of Moscow State University (Moscow, Russia). It was therefore important to compare these types with types of the species described by British authors.

The Museum of Comparative Zoology at the Harvard University (Cambridge, Massachusetts, U.S.A.) awarded me an Ernst Mayr grant for the travel to the Natural History Museum in London and to the University Museum of Natural History in Oxford to study these types. I worked there for 6 weeks in August and September 1997. I have studied nearly 200 types and found nine new synonyms.

The following abbreviations are used in the text to designate institutions where the type material is housed:

- KRAKÓW: Instytut Systematyki i Ewolucji Zwierząt, Polska Akademia Nauk, Kraków, Poland.
 NHML: The Natural History Museum, London, Great Britain.
 OXUM: University Museum of Natural History, Oxford University, Great Britain.
 ZIN: Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia.
 ZMMU: Zoological Museum, Moscow State University, Moscow, Russia.

LIST OF SPECIES

(arranged alphabetically by their valid names)

Cerceris antennata F. Morawitz

Cerceris antennata F. Morawitz, 1890:598, ♂. Holotype: ♂, Turkmenistan: Küren-Dagh (ZIN, examined).

Cerceris nursei Turner, 1912:512, ♀, ♂. Lectotype: ♂, Pakistan: Quetta (NHML, examined), present designation, in order to ensure that the name is properly and consistently applied. **New synonym.**

The lectotype of *C. nursei* bears the following labels: 1. Quetta 5.03, 2. *Cerceris nursei* Turn., type ♂, and 3. Nurse Coll.: 1915-34.

This species belongs to the *specularis* group. It differs from closely related species by the markedly concave clypeus, unusually short pygidial plate, and presence of flat brushes of dense setae in posterolateral corners of male sternum VI (Kazenas 1984:201-203).

Cerceris rothneyi Cameron

Cerceris rothneyi Cameron, 1890:251, ♀ (as *Rothneyi*, incorrect original capitalization). Lectotype: ♀, India: West Bengal: Barrackpore (OXUM), designated by Empey, 1984:79 (Article 74.6).

Cerceris supposita Kohl, 1916:122, ♂. Syntypes: Turkmenistan: Serakhs (KRAKÓW, examined). **New synonym.**

The lectotype of *Cerceris rothneyi* should be in Oxford (Empey, 1984), but I was unable to locate it. However, 3 specimens (2 ♀, 1 ♂) in NHML agree with the original description. The first specimen has the following labels: 1. N. Kanara, and 2. *Cerceris rothneyi* Cam.; the second one: 1. N. Kanara, and 2. Bombay Presidency, pres. by E. Comber 1910-255; the third one: 1. T.R. Bell, Karachi, 2. *Cerceris rothneyi* Cam. ♂, and 3. 1911-276.

I consider these specimens to be conspecific with *C. supposita* Kohl, a member of the *bupresticida* group. It differs from all closely related species by the combination of the clypeal structure in the female, form of the vertical lamella on female sternum V, sculpture of propodeal enclosure, color, and other features (Kazenas 1984:79-81). In particular, the clypeal free margin of the female has 4 teeth; the vertical lamella of sternum V has a roundly prominent margin; the propodeal enclosure is fully unsculptured, shiny; the female pygidial plate is not narrowing posterad; male tergum VI and sternum VI each has a posterolateral tooth. Also, tergum I is partly red (also tergum II in some specimens), whereas female tergum IV has an uninterrupted pale yellow fascia apically.

Cerceris tetradonta Cameron

Cerceris tetradonta Cameron, 1890:261, ♀, ♂. Syntypes: N. India: Poona (depository unknown).

Cerceris barrei Radoszkowski, 1893:68, ♀, ♂. Syntypes: Turkmenistan: Serax (KRAKÓW, not examined). **New synonym.**

There are six specimens of *C. tetradonta* Cameron in NHML; one of them was collected in Pakistan (Karachi), three came from India (Abu, Deesa, and Khandala), and two from Sri Lanka. They are conspecific with specimens of *Cerceris barrei* Radoszkowski from Turkmenistan in ZIN

determined by Gussakovskij and Shestakov. *C. tetradonta* belongs to the *albofasciata* group and closely resembles *C. albofasciata* Rossi, but differs by the form of the clypeal free margin in the female and details of the body sculpture and color (Kazenas 1984:185–186). In particular, the clypeal free margin is conspicuously dentate, the mesopleuron and propodeal side have yellow spots, and the gastral sterna largely and the legs are yellow.

Cerceris turkestanica Radoszkowski

Cerceris rufonodis Radoszkowski, 1877:56, ♀, ♂. Syntypes: Uzbekistan: Djisak, Tashkent; and Kyrgyzstan: Osh in Fergana Valley (ZMMU, examined). Preoccupied by *Cerceris rufinodis* F. Smith, 1856 (Article 58.12, use of different connecting vowel).

Cerceris turkestanica Radoszkowski, 1893:66. Replacement name for *Cerceris rufonodis* Radoszkowski, 1877 (proposed to replace *Cerceris rufinoda* Cresson, 1865).

Cerceris compta Turner, 1912:803, ♀. Lectotype ♀: Pakistan: Karachi (NHML, examined), present designation, in order to ensure that the name is properly and consistently applied. **New synonym.**

The lectotype female in NHML has the following labels: 1. Type, 2. E. Comber, Karachi, Oct. 09, 3. *Cerceris compta* Turn. Type, 4. Bombay Presidency, pres. by E. Comber 1910-255, and 5. B.M. Type Hym. 21.1, 362.

The type of *C. compta* is identical with *C. turkestanica*. This species, a member of the *rybyensis* group, is characterized by the form of the female clypeus whose free margin is slightly sinuous on each side of the small, median incision. Also, sternum II has a prominent basal plate, the propodeal enclosure is almost entirely smooth, and the gastral color pattern is distinctive (see Kazenas, 1984:35); gastral segment I may be red or black. The propodeal side has a large yellow spot, and the legs are yellow except the femora are black ventrally.

Cerceris unidentata F. Morawitz

Cerceris unidentata F. Morawitz, 1890:601, ♀. Holotype: ♀, Turkmenistan: Kopet-Dagh near Chuli (ZIN, examined).

Cerceris rhynchophora Turner, 1912:510, ♀, ♂. Lectotype: ♀, Pakistan: Quetta (NHML, examined), present designation, in order to ensure that the name is properly and consistently applied. **New synonym.**

The lectotype female of *C. rhynchophora* in NHML has the following labels: 1. Type H.T., 2. Quetta 5.03, 3. *Cerceris rhynchophora* Turn., Type, 4. ♀, and 5. B.M. Type Hym. 21.1.426.

The specimens of *C. unidentata* F. Morawitz from Turkmenistan in ZIN are conspecific with the lectotype female of *C. rhynchophora* Turner. The species differs from other *Cerceris* by the following: propodeal enclosure closely punctate and with fine, transverse ridges; jugal lobe of hindwing 7–9 times shorter than anal cell; middle clypeal lobe in female with characteristic, overhanging, roof-like projection, in male with narrow, longitudinal carina and tridentate free margin (see Kazenas, 1984:178–180).

Laphyragogus kohlii (Bingham)

Lianthrena kohlii Bingham, 1896:213, ♀, ♂. Lectotype ♂: "N. India", may be Pakistan: Punjab: no specific locality (NHML, examined), present designation, in order to ensure that the name is properly and consistently applied.

Laphyragogus turanicus Gussakovskij, 1952:227. Lectotype: ♀, Tajikistan: Ayvadj at Kafirngan River (ZIN, examined), present designation, in order to ensure that the name is properly and consistently applied. **New synonym.**

There are 3 specimens in NHML. Of them, 1 ♀ and 1 ♂ were collected in Deesa and 1 ♂ (lectotype) is simply labeled North India. The last specimen has the following labels: 1. Type, 2. N. Ind., 3. *Lianthrena kohlii* Bingham. ♀ Type, and 4. B.M. Type 21.88. It is actually a male.

De Beaumont (1959) and Gussakovskij

(1952) discussed color differences between *kohlii* and *turanicus*. The specimens I studied do not differ morphologically and are very similar in color, so I consider them conspecific. The species differs from its congeners by the form of the first metatarsal article in the female and the structure of the flagellum and sternum VII in the male (Gussakovskij 1952).

Palarus funerarius F. Morawitz

Palarus funerarius F. Morawitz, 1890:136, ♀. Holotype: ♀, Mongolia: Zagan-Buryuk (ZIN, examined).

Palarus nursei Turner, 1911:481, ♀, ♂. Lectotype: ♂: Pakistan: Quetta (NHML, examined), present designation, in order to ensure that the name is properly and consistently applied. **New synonym.**

There are 3 specimens (2 ♀, 1 ♂) of *P. nursei* in NHML. The lectotype male has the following labels: 1. Type H.T., 2. Quetta 6.03, 3. ♂, 4. *Palarus nursei* Turner Type, 5. Col. C.G. Nurse Collection 1920–72, and 6. B.M. Type Hym. 21.77.

The specimens of *P. nursei* from Quetta, Pakistan and of *P. funerarius* from many localities in Central Asia are very close morphologically and to my mind conspecific. The differences in color are not conspicuous. *P. funerarius* is similar to *P. bisignatus* F. Morawitz, but differs in color and in structure of the male flagellum (F. Morawitz 1890b:136–139). Also, male sternum I of *P. funerarius* has a pair of tubercles (none in *P. bisignatus*) and the apical prominence of sternum II has 2 transverse carinae (one in *P. bisignatus*, evanescent in some specimens). The gaster of *P. funerarius* has no red, and femora have a large black spot each.

Philanthus elegantissimus Dalla Torre

Philanthus elegans F. Smith, 1873:415, ♀. Holotype or syntypes: "N. India", may be Pakistan: no specific locality (depository unknown). Preoccupied by *Philanthus elegans* F. Smith, 1856, now in *Trachypus*.

Philanthus elegantissimus Dalla Torre, 1897:485.

Replacement name for *Philanthus elegans* F. Smith, 1873.

Philanthus marikovskii Kazenas, 1978:662, ♀, ♂. Holotype ♀: Kazakhstan: 15 km E Ayak-Kalkan (ZIN, examined). **New synonym.**

I was unable to locate the original specimens of F. Smith either in London or in Oxford, but 3 specimens in NHML (2 ♀ and 1 ♂) from Deesa probably collected by C.G. Nurse agree with the original description. I consider them to be conspecific with *Philanthus marikovskii*. The species is morphologically close to *Ph. venustus* (Rossi) and *Ph. rubriventris* Kazenas, but differs in having extensive pale yellow coloration (Kazenas 1978: 662–664).

Podalonia hirsuta mervensis (Radoszkowski)

Ammophila mervensis Radoszkowski, 1887:89, ♀, ♂. Syntypes: Turkmenistan: Samsaul; Caucasus; and Corsica (KRAKÓW, not examined).

Ammophila bolanica Nurse, 1903:8, ♀. Lectotype: ♀, Pakistan: Quetta (NHML, examined), present designation, in order to ensure that the name is properly and consistently applied. **New synonym.**

There are 3 ♀ of *A. bolanica* from Quetta in NHML. The lectotype has 6 labels: 1. Type, 2. Quetta, 3. ♀, 4. Type, 5. Coll. C.G. Nurse Collection 1920–72, and 6. B.M. Type Hym. 21730.

These specimens are conspecific with specimens of *A. mervensis* (Radoszkowski) from Transcaspia in ZIN and ZMMU. R.M. Bohart and A.S. Menke (1976) consider *A. mervensis* to be a subspecies of *Podalonia hirsuta* (Scopoli). It differs from the nominotypical subspecies in having an all black gaster.

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LITERATURE CITED

- Beaumont, J. de. 1959. Le genre *Laphyragogus* Kohl (Hym. Sphecidae). *Revue Suisse de Zoologie* 66, 4: 723-734.
- Bingham, C. T. 1896. On some exotic fossorial Hymenoptera in the collection of the British Museum with descriptions of new species and of a new genus of the Pompilidae. *The Journal of the Linnean Society, Zoology* 25: 422-445, pl. XIX.
- Bohart, R. M., and A. S. Menke. 1976. *Sphecidae Wasps of the World. A generic revision*. University of California Press, Berkeley, Los Angeles, London. 1 color plate, IX + 695 pp.
- Cameron, P. 1890. Hymenoptera Orientalis, or contributions to a knowledge of the Hymenoptera of the Oriental Zoological Region. Part. II *Memoirs and Proceedings of the Manchester Literary & Philosophical Society* 4, 3: 239-284, pl. IX-X.
- Dalla Torre, K. W. von, 1897. *Catalogus Hymenopterorum hucusque descriptorum systematicus et synonymicus. Vol. VIII: Fossores (Sphegidae)*. Lipsiae: Guilelmi Engelmann. 749 pp.
- Empey, H. N. 1984. Notes on the *Cerceris* types of Cameron from the Oriental Region (Hymenoptera: Sphecidae: Philanthinae). *Journal of the Entomological Society of Southern Africa* 47: 75-82.
- Gussakovskij, V. V. 1952. Novye i maloizvestnye vidy Psammocharidae i Sphecidae (Hymenoptera) zapadnogo Tadzhikistana. *Trudy Zoologicheskogo Instituta Akademii Nauk SSSR*. 10: 199-288. (In Russian)
- Kazenas, V. L. 1978. Novye vidy royushchikh os (Hymenoptera, Sphecidae) iz yugo-vostochnogo Kazachstana. *Entomologicheskoye Obozrenie* 57, 3: 661-665. (In Russian)
- Kazenas, V. L. 1984. *Royushchye osy Cercerisy Sredney Azii i Kazachstana*. Alma-Ata: Nauka Kaz. SSR. 232 pp. (In Russian)
- Kohl, F. F. 1916 (1915). Beitrag zur Kenntnis der Gattung *Cerceris* auf Grundlage der O. Radoszkowskyschen Sammlung. *Archiv für Naturgeschichte, Abteilung A* 88, 7: 107-125.
- Marshakov, V. G. 1977. Obzor ruyushchikh os tribu Crabronini (Hymenoptera, Sphecidae) fauny SSSR. Rod *Crabro* Fabricius, 1775. *Entomologicheskoe Obozrenie* 56: 854-872. (In Russian)
- Morawitz, F. 1889. Insecta, a cl. G. N. Potanin in China et in Mongolia novissime lecta. IV. Hymenoptera Aculeata. *Horae Societatis Entomologicae Rossicae* 23: 112-168.
- Morawitz, F. 1890. Hymenoptera fossoria transcaspica nova. *Horae Societatis Entomologicae Rossicae* 24: 570-645.
- Nurse, C. G. 1903a. New species of Indian Aculeate Hymenoptera. *Annals and Magazine of Natural History (Series 7)* 11: 511-526.
- Nurse, C. G. 1903b. New species of Indian Hymenoptera. *The Journal of the Bombay Natural History Society* 15: 1-18.
- Pulawski, W. J. 1975 (1974). Synonymical notes on Larrinae and Astatinae (Hymenoptera: Sphecidae). *Journal of the Washington Academy of Sciences* 64: 308-323.
- Pulawski, W. J. 1979. A revision of the World *Proso-pigastra* Costa (Hymenoptera, Sphecidae). *Polskie Pismo Entomologiczne* 49: 3-134.
- Pulawski, W. J. 1995. The wasp genus *Gastrosericus* Spinola, 1839 (Hymenoptera: Sphecidae). *Memoirs of the California Academy of Sciences* 18: 1-174.
- Radoszkowski, O. 1877. Sphegidae. In: Voyage au Turkestan d'A. P. Fedchenko, fasc. 14, tome 2, partie 5. *Izvestiya Imperatorskogo Obshchestva Lyubitel'ey Estestvoznaniya, Antropologii i Etnografii pri Imperatorskom Moskovskom Universitete* 26: 1-87, pl. I-VIII. (In Russian)
- Radoszkowski, O. 1887. Faune Hyménoptérologique Transcaspienne (suite). *Horae Societatis Entomologicae Rossicae* 21: 88-101, pl. IV-V.
- Radoszkowski, O. 1893. Faune hyménoptérologique Transcaspienne. Supplément. *Horae Societatis Entomologicae Rossicae* 27: 38-81, 490-493. pl. IV-V.
- Smith, F. 1856. *Catalogue of hymenopterous insects in the collection of the British Museum. Part IV. Sphegidae, Larridae, and Crabronidae*. London. p. 207-497, pl. IX-XI.
- Smith, F. 1873. Descriptions of new species of fossorial Hymenoptera in the collection of the British Museum and of a species of the rare genus *Isiwara* belonging to the family Dorylidae. *Annals and Magazine of Natural History (Series 4)* 12: 49-59, 99-108, 253-260, 291-300, 402-415.
- Turner, R. E. 1911. Notes on fossorial Hymenoptera. IV. Remarks on the Genus *Palarus*. *Annals and Magazine of Natural History (Series 8)* 7: 479-485.
- Turner, R. E. 1912a. A monograph of the wasps of the genus *Cerceris* inhabiting British India. With Notes on other Asiatic Species. *The Journal of the Bombay Natural History Society* 21, 2: 476-516; 21,3: 794-819.
- Turner, R. E. 1912b. Notes on Fossorial Hymenoptera.—X. On new species from the Oriental and Ethiopian Regions. *Annals and Magazine of Natural History (Series 8)* 10: 361-377.